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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/449,435	11/24/1999	PAUL FREDERICK KOEPPE	05770-092001	6281

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EXAMINER
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RIOS CUEVAS, ROBERTO JOSE

ART UNIT	PAPER NUMBER
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2836

DATE MAILED: 05/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/449,435

Applicant(s)

KOEPE ET AL.

Examiner

Roberto J. Rios

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-15,17-20 and 23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 9-15, 19, 20 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 9, the limitations "sufficient level" and "sufficient duration" render the claim unclear and indefinite failing to clearly set forth the metes and bounds of the claimed invention.

As per claim 12, the limitation "acceptable utility standards" renders the claim unclear and indefinite failing to clearly set forth the metes and bounds of the claimed invention.

As per claim 23, the limitations "sufficient level" and "sufficient duration" render the claim unclear and indefinite failing to clearly set forth the metes and bounds of the claimed invention.

3. The following art rejection will be made as best understood by the Examiner in light of the above 35 USC 112 rejections.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-15, 17-20 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gyugyi (US patent 5,329,222 B1).

As per claim 1, Gyugyi et al (herein after Gyugyi) teach a voltage recovery device connected to a utility power network (Figure 1), the voltage recovery device comprising an energy storage device (31) connected to the utility power network and configured to transfer real and reactive power between the utility power network and the voltage recovery device to recover the voltage on the utility power network (col. 10, line 18) to within a predetermined proportion of the nominal voltage, following a fault condition detected on the utility power network (col. 5, line 41+). Gyugyi does not specifically disclose the utility power network comprising a transmission network connected to a distribution network comprising a transmission line. However, the Examiner takes official notice that a utility power network comprises a power source connected to a transmission line network, which is in turn connected to a distribution line network of a lower voltage (see Response to Arguments). Gyugyi ('222) does not specifically disclose the voltage recovery device connected in shunt to the utility network. However, Gyugyi ('139) discloses teaches a voltage recovery device, wherein recovery voltage is injected into the utility power network by a shunt transformer. Gyugyi ('139) also teaches that with proper controls the shunt connected recovery device can perform the same voltage compensation as the series connected recovery device (col. 6, line 8).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Gyugyi ('222) and Gyugyi ('139) such

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that voltage recovery device is hunt connected for the purpose of providing reactive power compensation and execute an indirect voltage and power control.

As per claim 2, Gyugyi discloses that the voltage recovery device can be configured to provide real and reactive power, as needed (col. 5, line 48+). Moreover, the Examiner takes official notice that it is well known in the art to provide a combination of compensating real and reactive power to provide highly effective damping of power oscillations in the system.

As per claim 4, Gyugyi discloses that the voltage recovery device can be configured to provide real and reactive power, as needed (col. 5, line 48+). Moreover, the Examiner takes official notice that a predetermined recovering time range is a design choice that depends mostly of the type and capacity of the loads connected to the power network (see Response to Arguments). Furthermore, applicant admitted that maintaining the transmission line network voltage above a minimum level of 0.90 p.u. of the nominal voltage is a well-accepted industry standard.

As per claim 5, Gyugyi teaches the voltage recovery device comprising an inverter (35) coupled between the energy storage unit and the utility power network; and a controller (38) connected to the inverter and configured to control the amount of real and reactive power transferred between the energy storage device unit and the utility power network (col. 5, line 41+).

As per claim 6, Gyugyi teaches that the energy storage device can comprise of a superconducting magnet (col. 5, line 12).

As per claim 7, Gyugyi teaches the voltage recovery device being selected from a group consisting of a SMES, flywheel device or a battery (col. 5, line 12).

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As per claim 8, Gyugyi teaches for purposes of illustration the energy storage unit comprising a capacitor and a DC/DC converter acting as an interface between the capacitor and the inverter. However, the Examiner takes official notice that it is well known in the art to provide a magnet interface between an energy storage unit comprising a magnet and the inverter to ensure proper power regulation and bi-directional power flow (see Response to Arguments).

As per claims 9 and 10, Gyugyi teaches a method for stabilizing a utility power network, said method comprising electrically connecting a voltage recovery device having an energy storage unit (31) to the distribution network (Figure 1), detecting a fault condition on the utility power network, and operating in response to detecting the fault condition the voltage recovery device to transfer real and reactive power to the utility power network to recover the voltage on the utility power network to within a predetermined proportion of the nominal voltage (col. 5, line 41+). Gyugyi does not specifically disclose the utility power network comprising a transmission network connected to a distribution network comprising a transmission line. However, the Examiner takes official notice that a utility power network comprises a power source connected to a transmission line network, which is in turn connected to a distribution line network of a lower voltage (see Response to Arguments). Gyugyi ('222) does not specifically disclose the voltage recovery device connected in shunt to the utility network. However, Gyugyi ('139) discloses teaches a voltage recovery device, wherein recovery voltage is injected into the utility power network by a shunt transformer. Gyugyi ('139) also teaches that with proper controls the shunt connected recovery

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device can perform the same voltage compensation as the series connected recovery device (col. 6, line 8).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Gyugyi ('222) and Gyugyi ('139) such that voltage recovery device is hunt connected for the purpose of providing reactive power compensation and execute an indirect voltage and power control.

As per claim 11, Gyugyi teaches electrically coupling an inverter (35) between the energy storage unit (31) and the utility power network, wherein a controlling unit (38) controls the inverter to control the level of real and reactive power transferred between the energy storage unit and the utility power network (col. 5, line 41+).

As per claim 12, Gyugyi discloses that compensating real and reactive power is provided to compensate for voltage faults substantially instantaneously.

As per claim 13, Gyugyi discloses that the voltage recovery device can be configured to provide real and reactive power, as needed (col. 5, line 48+). Moreover, the Examiner takes official notice that a predetermined recovering time range is a design choice that depends mostly of the type and capacity of the loads connected to the power network (see Response to Arguments). Furthermore, applicant admitted that maintaining the transmission line network voltage above a minimum level of 0.90 p.u. of the nominal voltage is a well-accepted industry standard.

As per claim 14, Gyugyi teaches that the energy storage device can comprise of a superconducting magnet (col. 5, line 12).

As per claims 15, Gyugyi teaches the voltage recovery device being selected from a group consisting of a SMES, flywheel device or a battery (col. 5, line 12).

As per claims 17-20, Gyugyi teaches dynamically controlling the transfer of compensating real power to the utility power network. Moreover, the Examiner takes official notice that it is well known in the art to control the level and amount of compensating real power depending on the type and magnitude of the utility fault and the power capacity (see Response to Arguments).

As per claim 23, the Examiner takes official notice that it is well known in the art to provide multiple recovery devices in a utility power network to increase the system's protection capability and the compensating power capacity (see Response to Arguments).

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1, 9 and 23 have been considered but are moot in view of the new ground(s) of rejection. Moreover, the Examiner wants to point out that applicant has failed to seasonably traverse each and every official notice taken in the last office action mailed on 07/23/2001. If applicant does not seasonably traverse the well-known statement during examination, then the object of the well-known statement is taken to be admitted prior art. *In re Chevenard*, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant is charged with rebutting the well-known statement in the next reply (amendments filed on 02/08/2002) after the Office action in which the well-known statement was made (non-final office action mailed on 07/23/2001), MPEP§ 2144.03.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP



§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

#### **Communication with PTO**

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rios whose telephone number is (703) 306-5518. In the event that Examiner Rios cannot be reached, his supervisor, Brian Sircus may be contacted at (703) 308-3119. The fax phone number for this group is (703) 305-3432.



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